UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/687,025	10/15/2003	Xiaoming Cheng	252209-1010	9143

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EXAMINER
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ART UNIT	PAPER NUMBER
2162	

DATE MAILED: 04/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
	10/687,025	CHENG ET AL.
Office Action Summary	Examiner	Art Unit	
	Dennis Myint	2162	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *15 October 2003*.

2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-41* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-41* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on *15 October 2003* is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All b) ☐ Some * c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *15 October 2003*.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____ .

DETAILED ACTION

1.   Claims 1-41 have been examined.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of

the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

the various claims was commonly owned at the time any inventions covered therein

were made absent any evidence to the contrary. Applicant is advised of the obligation

under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g)

prior art under 35 U.S.C. 103(a).

2.   Claim 1-6, 9, 10, 12, 13,14, 17-20, 22-30, 33, and 35-41 are   rejected under 35

U.S.C. 103(a) as being unpatentable over Aron (WIPO International Publication Number

WO 02/32095) in view of Bhide (U.S. Patent Number 6564214).

Referring to claim 1, Aron is directed to a method for searching of a mobile

phone comprising a plurality of numbers to associate a received number with a stored

directory entry (Aron, Page 3 Line 16-25), the method comprising:

a) receiving a number, the received number being defined by a plurality of digits

(Aron, Page 3 Line 26-30); and

b) comparing the incoming to the list/directory of preferred callers' number (Aron,

Page 3 Line 26-30).

However, Aron does not explicitly recite how digits of the incoming number are

compared to those of the preferred callers' number. On the other hand, Bhide teaches a

method and system for searching a data record for valid identifier, wherein a Point of

Presence (POP) (a local exchange that users dial into via a modem which connects the

users to a wide area or global communication network, Bhide, Column 1 Line 62

through Column 2 Line 5) makes a pessimistic lookup search wherein comparisons are

made between the last (rightmost) N digits of the raw POP string and the rightmost N

digits of each POP number in the lookup phone book (Bhide, Column 10 Line 38-60). If

said comparison of the rightmost digits fails, then a optimistic lookup search is

conducted comparing the groups of digits to the left of said group of rightmost digits,

such as country code and area code (Bhide, Column 10 Line 62 through Column 11

Line 5).

At the time the invention was made, it would have been obvious to a person of

ordinary skill in the art to combine the feature of Bhide for comparing digits between a

phone number and phone numbers in a phone book data, starting the comparison from

the rightmost of the POP string and then moving to the digits to the left of the already-compared digits, with the method and system of Aron which compares the digits of an incoming call to a list/directory of preferred callers number so that in the combined method and system, the method would

       b) selecting a rightmost digit of the received number as a current comparison digit ("pessimistic lookup search" taught by Bhide);

       c) comparing the current comparison digit with a corresponding digit of each of a plurality of numbers stored in the directory (Aron's method of comparing incoming numbers to the preferred callers' numbers in view of "pessimistic lookup search" taught by Bhide);

       d) ending the search, if no matching digits are identified (Aron's method of comparing incoming numbers to the preferred callers' numbers in view of "pessimistic lookup search" taught by Bhide);

       e) selecting, as a current comparison digit, a digit to the immediate left of a previous current comparison digit (Aron's method of comparing incoming numbers to the preferred callers' numbers in view of "optimistic lookup search" taught by Bhide); and

       f) repeating steps c through e, until a predetermined number of digits of the received number have been compared against the plurality of numbers stored in the directory (Aron's method of comparing incoming numbers to the preferred callers' numbers in view of "pessimistic lookup search and optimistic lookup search" taught by Bhide).

One would have been motivated to do so in order that, "In order to generate

meaningful information that can be used to analyze system performance and

troubleshoot system problems, the aggregator must organize data by associating like

data with like data" (Bhide, Column 2 Line 25-32).

Referring to claim 2, Aron in view of Bhide is directed to the method of claim 1,

wherein the predetermined number of digits comprises all of the digits of the received

number (Aron, Page 3 Line 26-30).

Referring to claim 3, Official Note is taken that it is notoriously well known in the

art that address book or address directory or phone number directory are stored in the

memory of today's mobile phones.

Referring to claim 4, Official Note is taken that it is notoriously well known in the

art that removable memory chips are used in portable personal electronic devices,

including fancy mobile phones.

Referring to claim 5, Official Note is taken that it is notoriously well know in the

art that today's mobile phones display an address entry (a directory entry) with matching

numbers found in the address book (the directory) of said mobile phones.

Referring to claim 6, Aron in view of Bhide is directed to the method of claim 1,

wherein the comparing more specifically compares the current comparison digit as a

character value (Bhide, Column 10 Line 38-60, i.e. " Character string or numbers are

conveniently presented as a sequence of digits" and Bhide, Column 11 Line 42-67, i.e.

"Contained within the character string dialed by the telephone modem is a sequence of

numeric digits representing the telephone number of the POP to which the user is connected to or, alternatively, ...") .

Referring to claim 9, Aron in view of Bhide is directed to, in a mobile phone, a method for searching a directory comprising a plurality of numbers to associate a received number with a stored directory entry, the method comprising:

a) receiving a number, the received number being defined by a plurality of segments (Aron, Page 3 Line 26-30); (Note that incoming calls includes area code.)

b) selecting a rightmost segment of the received number as a current comparison segment (Bhide, Column 10 Line 38-60, i.e. "rightmost N digits");

c) comparing the current comparison segment with a corresponding segment of each of a plurality of numbers stored in the directory (Bhide, Column 10 Line 38-60, i.e. "lookup search");

d) ending the search, if no matching segments are identified (Bhide, Column 10 Line 62-64, i.e. "If the initial pessimistic lookup search fails to find...");

e) selecting, as a current comparison segment, a segment to the immediate left of a previous current comparison segment (Bhide, "optimistic lookup search" taught by Bhide Column 10 Line 62 through Column 11 Line 5); and

f) repeating steps c through e, until a predetermined number of segments of the received number have been compared against the plurality of numbers stored in the directory (Aron's method of comparing incoming numbers to the preferred callers' numbers in view of "pessimistic lookup search and optimistic lookup search" taught by Bhide).

Referring to claim 10, Aron in view of Bhide is directed to the method of claim 9, wherein the predetermined number of segments comprises all segments of the received number (Aron, Page 3 Line 26-30 and Bhide Column 10 Line 38 through column 11 Line 5).

Claim 12 is rejected on the same basis as claim 5.

Referring to claim 13, Aron in view of Bhide is directed to the method of claim 9, wherein the step of receiving the number comprises receiving the number through a caller identification feature (Aron, Page 8 Line 18-27, i.e. "Next, when an coming call is received, the incoming caller's number is *identified*."). Also note that caller ID feature is notoriously well known in the art.

Referring to claim 14, Aron in view of Bhide is directed to the method of claim 9, wherein the plurality of segments comprise a mobile country code (MCC) segment, a mobile network code (MNC) segment, and a mobile subscriber identification number (MSIN) segment, wherein the MSIN segment is the rightmost segment (Aron, Page 3 Line 26-30 and Bhide Column 10 Line 38 through column 11 Line 5). Note that said segments, namely MMC, MNC and MSIN are included in today's mobile call ID strings and it is inherent in Aron's method and system. As such, Bhide's method and system would identify those segments, with MSIN as the rightmost segment.

Claim 17 is rejected on the same basis as claim 14.

Referring to claim 18 and 19, Official Note is taken that the concept of using digits, either single and multiple (plurality), in a segment of a caller string is notoriously well known in the art.

Claim 20 is rejected on the same basis as claim 6.

Claim 22 is rejected on the same basis as claim 1.

Referring to claim 23, Aron in view of Bhide is directed to a method of storing a number in a directory for a mobile phone comprising:

directing a number to be stored in a directory to be associated with the mobile phone, the number comprising a base number and at least one prefix extension;

comparing a first prefix extension with a first corresponding default prefix extension; and

if the comparison of the first prefix extension and first default prefix extension indicates a match, then storing the base number in the directory, but not storing the first prefix extension in the directory (Aron, Page 7 Line 8-12, i.e. "Groups of preferred numbers"). Note that the method of Aron in view of Bhide organizes phone numbers into groups such as work callers, social callers, interstate callers or overseas callers or any combination thereof. As such, said numbers are organized based on prefixes such as area codes or country codes. It is inherent in said method that prefixes would not need to be saved.

Claim 24 is rejected on the same basis as claim 23,

Referring to claim 25, Official Note is taken that the concept of storing address directories in mobile phone memory is notoriously well known today.

Claim 26 is rejected on the same basis as claim 4.

Referring to claim 27, Official Note is taken that the concept of using SIM cards in mobile phones is notoriously well known today.

Claims 28, 29, and 30 are rejected on the same basis as claim 1, 5, and 6 respectively.

Claim 33 is rejected on the same basis as claim 23.

Claim 35, 36, 37, 28, 39, 40, and 41 are rejected on the same basis as claim 5, 13, 14, 15, 16, 17, and 1 respectively.

3.   Claim 7, 21, 31, and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aron in view of Bhide and further in view of Donoho et al. (U.S. Patent Application Publication Number 2002/0156849).

Referring to claim 7, Aron in view of Bhide does not explicitly recite that current comparison digit is compared as an integer value. However, Donoho et al. teaches a method and apparatus for computed relevance messaging, wherein a zip code is extracted and then converted from string to integer and the integer value is compared to a numeral value (Donoho et al., Paragraph 0505).

At the time the invention was made, it would have been obvious to a person of ordinary skill to the feature of converting a string of numbers into an integer for comparing values as taught by Donoho et al. to the method and system of Aron in view of Bhide so that, in the resultant method and system, comparing more specifically compares the current comparison digit as an integer value. One would have been

motivated to do so simply because it is well know in the art that comparisons of number using their integer values are faster than comparing their character representations.

Claim 21 and 31 are rejected on the same basis as claim 7.

Claim 34 is rejected on the same basis as claim 21.

4.   Claim 8, 11, 15, 16, and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aron in view of Bhide and further in view of Makar et al. (U.S. Patent Number 6708203).

Referring to claim 8, Aron in view of Bhide as applied to claim 1 above does not explicitly teach that, for the stored numbers which have fewer digits than the received number, padding stored numbers with default values to the left of stored number. However, Makar et al. teaches a method and system for filtering messages, wherein phone numbers are padded with a default value of zero to the left of said phone numbers (Makar et al., Column 17 Line 52-64).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to add the feature of padding phone numbers with a default value in place of area codes as taught by Makar et al. to the method and system of Aron in view of Bhide as applied to claim 1 above so that the resultant method would further include left filling digits of numbers stored in directory with default values, for the numbers stored in the directory that have fewer digits than the received number. One would have been motivated to do so in order to use said default values as "wild cards for all area codes" (Makar et al., Column 17 Line 52-64).

Claim 11 is rejected on the same basis as claim 8.

Referring to claim 15, the method and system of Aron in view of Bhide and further in view of Makar et al. is directed to the method of claim, wherein a default value for the MCC segment and a default value for the MNC segment, and these default values are used as a part of the received number, if values for the MCC and MNC segments are not supplied with the received number. Note that the method of Aron in view of Bhide and further in view of Makar et al. would pad those segments a default value (a zero in this case).

Referring to claim 16, the method and system of Aron in view of Bhide and further in view of Makar et al. as applied to claim 15 above discloses the invention as claimed. The method and system of Aron in view of Bhide and further in view of Makar et al. would include defaults value for MCC segment and a default value for the MNC segment, and these stored values are used as part of the stored number (Makar et al., Column 17 Line 52-64).

Claim 32 is rejected on the same basis as claim 8.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dennis Myint whose telephone number is (571) 272-5629. The examiner can normally be reached on 8:30AM-5:30PM Monday-Friday.
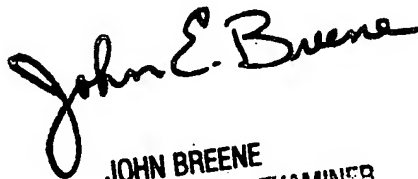
If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, John Breene can be reached on (571) 272-4107. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

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you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

Dennis Myint　　　　　　　　　　　　　　　　AU-2162

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